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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,125	05/02/2006	Stefan Schreiber	8050-0016	4990

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EXAMINER	
BERNARDI, BRENDA C	
ART UNIT	PAPER NUMBER
4157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,125	SCHREIBER, STEFAN	
	Examiner	Art Unit	
	BRENDA BERNARDI	4157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 through 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Arakawa US 2002/0155247.

Regarding Claim 1, Maekawa '871 discloses an optical data carrier in disc format having at least one CD layer having optically readable CD data structures whose lengths, to suit EFM modulation, are between 3 times and 11 times a basic length T (page 1, paragraph [0005] and page 6, paragraph [0130]).

Maekawa '871 fails to disclose the data carrier has at least one further data layer.

However, Wilkinson '595 teaches the data carrier has at least one further data layer (page 6, paragraph [0053]).

Maekawa '871 fails to disclose the refractive index of a transparent material which is used for a CD substrate is less than 1.58.

However, Arakawa '247 teaches the refractive index of a transparent material which is used for a CD substrate is less than 1.58 (page 6, paragraph [0085]).

Claim 1 also discloses 3 times the basic length (the 3T value) is at least 0.9 micrometres, 11 times the basic length (the 11T value) is at least 3.3 micrometres, from that surface of the data carrier through which the CD layer is read, and the CD layer is situated at a depth of less than 1.1 mm. These are rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Regarding Claim 2, Maekawa '871 discloses the claimed invention as recited above; however, fails to disclose the data carrier has, in addition to the CD layer, one or two DVD layers, the CD layer and the DVD layer(s) being read from opposite sides of the data carrier.

However, Wilkinson '595 teaches the data carrier has, in addition to the CD layer, one or two DVD layers, the CD layer and the DVD layer(s) being read from opposite sides of the data carrier (page 6 paragraph [0053]).

Regarding Claim 3, Maekawa '871 discloses the claimed invention as recited above; however, fails to disclose a data carrier which comprises at least one data layer which is readable and/or writable and/or re-writable by a blue laser.

However, Wilkinson '595 teaches a data carrier which comprises at least one data layer which is readable and/or writable and/or re-writable by a blue laser (page 7, paragraph [0062]).

Regarding Claim 4, Maekawa '871 discloses the claimed invention as recited above; however, fails to disclose a data carrier in which the data layer which is readable and/or writable and/or re-writable by the blue laser, and the CD layer are read from opposite sides of the carrier.

However, Wilkinson '595 teaches a data carrier in which the data layer which is readable and/or writable and/or re-writable by the blue laser and the CD layer are read from opposite sides of the carrier (page 6, paragraph [0053], and page 7, paragraph [0062]).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595.

Maekawa '871 discloses an optical data carrier in disc format having at least one CD layer having optically readable CD data structures whose lengths, to suit EFM modulation, are between 3 times and 11 times a basic length T (page 1, paragraph [0005] and page 6, paragraph [0130]).

Maekawa '871 fails to disclose the data carrier has at least one further data layer, namely a DVD layer.

However, Wilkinson '595 teaches the data carrier has at least one further data layer, namely a DVD layer, and the at least one DVD layer are read from opposite sides of the data carrier (page 6, paragraph [0053]).

Claim 5 also discloses 3 times the basic length (the 3T value) is at least 0.9 micrometres, 11 times the basic length (the 11T value) is at least 3.3 micrometres, from that surface of the data carrier through which the CD layer is read, the CD layer is situated at a depth of less than 1.1 mm, and the data carrier has a DVD substrate of a thickness of less than 0.570 mm. These are rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Thompson et al., US 2003/0129408.

Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose a data carrier in which the thickness of the DVD substrate is at least 0.55 mm.

However, Thompson '408 teaches a data carrier in which the thickness of the DVD substrate is at least 0.55 mm (page 14, paragraph [0135]).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Thompson et al., US 2003/0129408.

Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose a data carrier in which the thickness of the DVD substrate is 0.55 mm.

However, Thompson '408 teaches a data carrier in which the thickness of the DVD substrate is 0.55 mm (page 14, paragraph [0135]).

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, '871 in view of Wilkinson '595.

Regarding Claim 8, it discloses a data carrier has two DVD layers, and in that the thickness of the DVD substrate is reduced from the standard definition of 0.55 mm which applies in the two-layered case.

Wilkinson '595 teaches the data carrier has two DVD layers (page 6, paragraph [0053]).

Claim 8 discloses the thickness of the DVD substrate is reduced from the standard definition of 0.55 mm which applies in the two-layered case. Claim 8 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Regarding Claim 9, it discloses the pits and lands of the at least one DVD layer are enlarged to ensure optical compensation for a degradation of the reading signal.

Wilkinson '595 teaches the pits and lands of the at least one DVD layer are enlarged to ensure optical compensation for a degradation of the reading signal (page 6, paragraph [0051]).

7. Claims 10 through 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Arakawa, US 2002/0155247.

Regarding Claim 10, Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the refractive index of a transparent material which is used for a CD substrate is less than 1.58.

However, Arakawa '247 teaches the refractive index of a transparent material which is used for a CD substrate is less than 1.58 (page 6, paragraph [0085]).

Regarding Claim 11, Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the refractive index of a transparent material which is used for a CD substrate is less than 1.55.

However, Arakawa '247 teaches the refractive index of a transparent material which is used for a CD substrate is less than 1.55 (page 6, paragraph [0085]).

Regarding Claim 12, Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the refractive index of a transparent material which is used for a CD substrate is in the range from 1.40 to 1.55.

However, Arakawa '247 teaches the refractive index of a transparent material which is used for a CD substrate is in the range from 1.40 to 1.55 (page 6, paragraph [0085]).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Tanno et al., US Patent 5,233,582.

Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the transparent material which is used for the CD substrate has a lower refractive index than polycarbonate.

However, Tanno '582 teaches the transparent material which is used for the CD substrate has a lower refractive index than polycarbonate (column 3 lines 40-41, column 3 line 68 and column 4 lines 1-2).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Gotoh et al., US 2003/0172286.

Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the CD layer is at least party, preferably entirely, read-only.

However, Gotoh '286 teaches the CD layer is at least partly, preferably entirely, read-only (page 6, paragraph [0133]).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

10. Claim 18 discloses a data carrier wherein the total thickness of the data carrier is not more than 1.7 mm and preferably not more than 1.6 mm. Claim 18 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

11. Claim 19 discloses a data carrier wherein the total thickness of the data carrier is not more than 1.5 mm. Claim 19 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to

discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

12. Claim 20 discloses a data carrier wherein the data carrier has a diameter of less than 12 cm and preferably a diameter of approximately 8 cm. Claim 20 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

13. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Nee, US 2003/0138591.

Regarding Claim 21, Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose the CD layer is combined with a DVD layer and an SACD layer, the DVD layer and the SACD layer being read from opposite sides of the data carrier.

However, Nee '591 teaches the CD layer combined with an SACD layer (page 8, paragraph [0086]), and Wilkinson '595 teaches the CD layers combined with a DVD layer on a double-sided disk (page 6, paragraph [0053]).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no

change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention

Regarding Claim 22, it discloses the CD layer is situated below the SACD layer so that the SACD layer and the CD layers are optically separated from the DVD layer.

Nee '591 teaches the CD layer is situated below the SACD layer so that the SACD layer and the CD layers are optically separated from the DVD layer (page 8, paragraph [0086]).

14. Claim 23 discloses a data carrier wherein from that surface of the data carrier through which the CD is read, the CD layer is situated at a depth of less than 1.05 mm, and preferably of less than 1.0 mm. Claim 23 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

15. Claim 24 discloses a data carrier wherein from that surface of the data carrier through which the CD is read, the CD layer is situated at a depth of approx. 0.9 mm. Claim 24 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

16. Claim 25 discloses a data carrier in which the refractive index of a transparent material which is used for a further substrate is less than 1.58 and preferably less than 1.55. Claim 25 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

17. Claim 26 discloses a data carrier in which the refractive index of a transparent material which is used for a further substrate is in the range from 1.40 to 1.55. Claim 26 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

18. Claim 26 discloses a data carrier in which the refractive index of a transparent material which is used for a further substrate is in the range from 1.40 to 1.55. Claim 26 is rejected because "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

19. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595, further in view of Oshima et al., US 2003/0137913.

Maekawa '871 as modified above discloses the claimed invention as recited above; however, fails to disclose which has at least two substrates having different refractive indexes.

However, Oshima '913 teaches which has at least two substrates having different refractive indexes (page 2, paragraph [0016]).

All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

20. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maekawa, US 2003/0155871 in view of Wilkinson et al., US 2003/0174595.

Claim 28 discloses a data carrier characterised in that the readable structures of the CD layer are widened.

Wilkinson '595 teaches a data carrier characterised in that the readable structures of the CD layer are widened (page 17, paragraph [0171]).

21. Claim 29 discloses a data carrier characterised in that the readable structures of the CD layer are of a width of more than 500 nm and preferably of a width of more than 600 nm. Claim 29 is rejected because "[W]here the general

conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" in re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDA BERNARDI whose telephone number is (571)270-7125. The examiner can normally be reached on 5:30 to 3:00 M thru Th, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on 571 272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brenda Bernardi/

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